

WHAT IS CLAIMED IS

1. A protective covering device for machinery and equipment equipped with a mobile tool (3) that moves along at least one defined path (D); the device (1) being attached to the tool (3) and comprising a set of cover elements (6, 7, 8, 9) slidably coupled to each other and consisting of a first cover element (6) attached to the machine or piece of equipment at an area (4) to be protected, and a plurality of mobile cover elements (7, 8, 9) that move relative to each other and relative to the first cover element (6) along the defined path (D); each of the cover elements (6, 7, 8, 9) having an opening (6a, 7a, 8a, 9a) defined, on each element (6, 7, 8, 9) and with reference to the defined path (D), by two longitudinal portions (10) and two transversal portions (11, 12), the latter two defining a first and a second portion (13, 14) of a covering wall (15), the portions (13, 14), which are complementary, being positioned on opposite sides of the tool (3), wherein, in that in both the first and second portions (13, 14) of the covering wall (15), each transversal portion (11, 12) of each cover element (6, 7, 8, 9) comprises a section (12, 19) that overlaps the next section (12, 19) in tile-like fashion in a single direction (A) along the defined path (D), in such a way that all the sections (12, 19) of the covering wall (15) face the same direction (A).

2. The device according to claim 1, wherein the overlapping direction (A) of each section (12, 19) of the two portions (13, 14) of the covering wall (15) is from the top down.
3. The device according to claim 2, wherein the path (D) is substantially vertical.
4. The device according to any of the foregoing claims from 1 to 3, wherein, in the second portion (14) of the covering wall (15), the respective second sections (12) coincide with the transversal portions (12) of each of the cover elements (6, 7, 8, 9) and lie in the same plane as the longitudinal portions (10) of the respective cover elements (6, 7, 8, 9), and in the first portion (13) of the covering wall (15) the respective first sections (19) consist of second transversal portions (20) parallel to the respective transversal portions (11) to which they are associated through connecting walls (21) transversal to the path (D) and perpendicular to the two transversal portions (20, 11).
5. The device according to claim 4, wherein, for each first section (19), the respective second transversal portion (20), first transversal portion (11) and connecting wall (21) form a U-shaped box-like element (22); the box-like elements (22) constituting the first sections (19) of the cover elements (6, 7, 8, 9) being telescopically coupled with each other.

6. The device according to any of the foregoing claims, further comprising shock absorbing means (25) fitted between the cover elements (6, 7, 8, 9).
7. The device according to any of the foregoing claims, further comprising energy dissipating means (25, 26) for reducing the speed of two adjacent consecutive elements (6, 7, 8, 9) as they approach each other without returning energy between the two elements (6, 7, 8, 9) themselves.